REMARKS

Favorable reconsideration of this application in light of the following discussion is respectfully requested.

Claims 78-96 are presently active in this case. Claims 1-38 and 40 were cancelled by previous amendments. The present Amendment cancels Claims 39 and 41-77 without prejudice or disclaimer, and adds new Claims 78-96 without introducing any new matter.

In the June 12, 2009 final Office Action, Claims 39, 41-42, 49, 52-56, 58, 61, 63, 65 and 77 were rejected under 35 U.S.C. § 102(b) as anticipated by Fay et al. (U.S. Patent No. 4,704,033, hereinafter "Fay"). Claims 39 and 41-76 were also rejected over the reference Richards et al. (U.S. Patent Application Publication No. 2004/0110026, hereinafter "Richards") in view of Clark et al. (European Patent No. 1,229,321, hereinafter "Clark").

First, Applicants want to thank Examiner Bobby Ramdhanie, Art Unit 1797, for an interview granted to Applicants' representative Nikolaus P. Schibli, Ph.D., Reg. No. 56,994 on October 16, 2009. During the interview, the pending rejections were discussed, and Examiner Ramdhanie made some suggestions how to amend the claims. Moreover, the Examiner said that he would consider the outstanding rejections upon a formal submission of a response.

In response, Claims 39 and 41-77 are cancelled without prejudice or disclaimer, and new Claims 78-96 are presented. The claims find non-limiting support in the original claims, and in the specification as originally filed, for example, the features of new independent Claim 78 related to the step of generating and passing radiation through an optical mask are described in the specification starting at page 15, line 31. No new matter has been added.

In response to the rejections of Applicants' claims under 35 U.S.C. §§ 102(b) and 103(a), in light of the presentation of new claims, these rejections are now moot.

Accordingly, Applicants respectfully traverse the rejections and request reconsideration thereof.

Briefly summarizing, Applicants' independent Claim 78 is directed to a method for detecting change of a physically measurable property of a sample. The method includes the steps of (i) generating and passing radiation through an optical mask to generate masked radiation having a specific intensity distribution, the specific intensity distribution having a known pattern function that depends on a position where the radiation has passed through the mask; (ii) subjecting the sample to the masked radiation for a defined action time, to thereby cause a change in a physical property of the sample during the defined action time; (iii) detecting at least one of transmission, reflection, and scattering of analysis radiation generated by at least one of transmission, reflection, and scattering of the masked radiation by the sample, as a function of position coordinates of the analysis radiation relative to the sample and a wavelength of the analysis radiation, so as to determine a response function that describes intensity of the at least one of transmitted, reflected, and scattered analysis radiation as a function of the position coordinates relative to the sample and the wavelength; and (iv) determining a correlation of the specific intensity distribution of the masked radiation with the response function by a correlation analysis, the correlation analysis producing a measure of a change of the physically measurable property of the sample due to the masked radiation during the defined action time.

Turning now to the applied references, <u>Fay</u> is directed to an optical alignment apparatus, for positioning masks for x-ray photography. (<u>Fay</u>, Abstract.) <u>Fay</u> explains that a wafer 10 and a mask 11 can be vertically and horizontally aligned towards each other, for lithography purposes, by using laser diffraction to generate an alignment signal. (<u>Fay</u>, col. 3, ll. 9-16, col. 4, ll. 22-25, Fig. 4.) For this purpose, <u>Fay</u> focuses a laser beam onto a reflection grating located on the wafer 10 by means of a Fresnel zone plate, the laser beam originating

from laser source 20. (Fay, col. 3, ll. 7-10, col. 5, ll. 50-55, see also "wafer diffraction grating" in Fig. 1). The Fresnel zone plate is part of the mask 11. (Fay, col. 3, ll. 1-4.) Fay then detects the diffracted laser beams as α_1 and α_2 that are reflected from wafer 10, by passing through lenses 13, 15, mirrors 32 and 16, and first and second photon multiplier tubes 18, 33. (Fay, col. 3, ll. 9-16, Fig. 4, col. 4, ll. 34-42, col. 5, ll. 50-65.) However, Fay fails to teach all the features of Applicants' independent Claim 78. In particular, Fay at least fails to teach:

> (i) generating and passing radiation through an optical mask to generate masked radiation having a specific intensity distribution, the specific intensity distribution having a known pattern function that depends on a position where the radiation has passed through the mask;
>
> (ii) subjecting the sample to the masked radiation for a defined action time, to thereby cause a change in a physical property of the sample during the defined action time

(Claim 78, portions omitted.) In Fay, no sample is subjected to masked radiation that changes *the physical properties of the same sample* during the action time. To the contrary, in the system that Fay proposes, the diffraction grating located on the wafer 10 necessarily has to provide constant diffraction properties, and therefore, physical properties of the wafer are not changed by the irradiation with the laser beam.

The laser beams described in Fay, that are used for the alignment procedure, cannot produce such "a change in a physical property of the sample" on the wafer 10. (Fay, col. 2, ll. 39-42, col. 4, ll. 44-54.) Fay uses a helium-neon-laser that has a wavelength of 633 nm, and therefore has a very low photonic energy. Such laser beam does not cause any "physical property change" that is measurable. All the laser beams used in Fay simply serve to align a mask. To the contrary, in Fay's system it is particularly important that no physically measurable change of the diffraction grating on wafer 10 or Fresnel patterns on mask 11 occurs, otherwise the precision of alignment would be very poor, or could not even operate. (Fay, from col. 1, l. 60, to col. 2, l. 15.)

Therefore, the applied reference Fay fails to teach every feature recited in Applicants' independent Claim 78, and Claims 78-96 are believed to be patentably distinct over Fay.

Applicants also believe that the features of Applicants' independent Claim 78 patentably define over the suggested combination of Richards and Clark, even if we would assume that the combination is proper, as discussed next.

The applied reference Richards is directed to an electro-luminescent coating system to produce electroluminescent paintings on surfaces. (Richards, Abstract, Title.) Richards explains that a color providing film layer is applied onto a substrate, then a mid-coating film layer is applied over the color film layer, and subsequently, a clear-coat film layer is deposited on top of the mid-coating film layer. (Richards, Abstract, ¶ [0012].) The color providing film layer can include EL phosphor, and an electrical induction can be applied to the color providing film layer, by means of an AC induction coil, to cause the EL phosphor to electroluminesce. (Richards, ¶¶ [0018], [0021]). In paragraph [0024], Richards proposes to mask off certain portions of the color-providing film layer, to provide visual effects, such as illuminated designs, shapes, letters, etc. (Richards, ¶ [0024]). However, Richards fails to teach all the features of Applicants' independent Claim 78. In particular, Richards fails to teach:

> (i) generating and passing radiation through an optical mask to generate masked radiation having a specific intensity distribution, the specific intensity distribution having a known pattern function that depends on a position where the radiation has passed through the mask;
>
> (ii) subjecting the sample to the masked radiation for a defined action time, to thereby cause a change in a physical property of the sample during the defined action time

(Claim 78, portions omitted.) Richards clearly fails to teach that a sample is subject to masked radiation that has a known pattern function, because in Richards, the AC induction causing the electrical induction is applied uniformly. Although certain portions can be

masked off by the mid-coating film layer, as explained in paragraph [0024], but this mask does not have any effect on the AC induction. Contrarily, the mask is only applied to cover certain colored portions in a later stage, and never impacts the AC induction step. In this regard Richards explains the following:

> It is preferred that the mid-coat composition include some opaque pigmentation to establish unique design effects between the combination of the color-providing film layer and the mid-coat film layer. The opaque pigmentation is used to strategically or selectively mask, i.e., block, off certain portions of the electroluminescence from the EL phosphor. As a non-limiting example, after the color-providing film layer, with the EL phosphor, is established, certain portions of the color-providing film layer can be masked off to in the form of a design, shape, letters, etc., to be visual as a result of the electroluminescence of the EL phosphor.

(Richards, ¶ [0024], ll. 1-12.) In Richards, a substrate is merely coated with paint, and the paint can be cured or dried, or can be subjected with AC current radiation to activate illuminescence, and in later step, certain portions of the illuminating layer can be masked off, as discussed above.

The reference Clark, used by the pending Office Action to form a 35 U.S.C. § 103(a) rejection, fails to remedy the deficiencies of Richards, even if we assume that the combination is proper. Clark is directed to a method for predicting the outdoor durability of coating relative to a set of coatings, where all the coatings have been formed from aqueous coating compositions. (Clark, Abstract.) In Clark's method, the set of coatings are exposed to the same ambient outdoor conditions for the same time period, and the exposed coatings are subjected to a chemiluminescence test, and the results of the chemiluminescence test are compared with each other. (Clark, Abstract, ll. 8-13, ¶ [0027], Claim 1.) Thereby, *the entire sample* is subjected to the environmental effect with the ambient outdoor conditions, and no masking occurs.

Therefore, even if the combination of Richards and Clark is assumed to be proper, the cited passages of the combination fails to teach every element of Applicants' Claim 78.

Accordingly, Applicants respectfully traverse, and request reconsideration of this rejection based on these references.

Consequently, in view of the present amendment, no further issues are believed to be outstanding in the present application, and the present application is believed to be in condition for formal Allowance. A Notice of Allowance for Claims 78-96 is earnestly solicited.

Should the Examiner deem that any further action is necessary to place this application in even better form for allowance, the Examiner is encouraged to contact Applicants' undersigned representative at the below listed telephone number.

Respectfully submitted,

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